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REMARKS

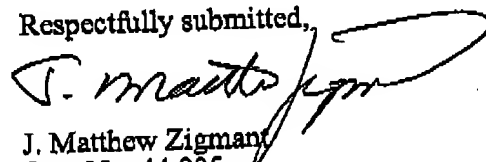
Claims 1-20 remain pending in this application. Claims 1, 3-6, 13, and 20 have been amended for reasons of style and clarity. None of the amendments made have narrowed the scope of the limitations or elements in the pending claims

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this application are in condition for allowance. The issuance of a formal notice of allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-752-2456.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

- 1 1. (Amended) An optical device comprising:
2 a first I/O waveguide carrying an optical signal with a plurality of
3 wavelengths;
4 a second I/O waveguide carrying a first wavelength of the plurality of
5 wavelengths;
6 a third I/O waveguide carrying a second wavelength of the plurality of
7 wavelengths; and
8 a first single-side-pass filter optically coupled to the first I/O waveguide,
9 wherein the first single-side-pass filter reflects a first wavelength between the first I/O
10 waveguide and the second I/O waveguide, and the first single-side-pass filter passes a
11 second wavelength between the first I/O waveguide and the third I/O waveguide.
- 1 3. (Amended) The optical device of claim 2 further comprising:
2 a second collimator assembly comprising a GRIN lens optically coupled to
3 the first single-side-pass filter and a [first] waveguide, wherein the first single-side-pass
4 filter passes the second wavelength between the first I/O waveguide and the third I/O
5 waveguide through the [first] waveguide of the second collimator assembly.
- 1 4. (Amended) The optical device of claim 3 further comprising:
2 a third collimator assembly comprising a GRIN lens, a first waveguide
3 optically coupled to the second waveguide of the first collimator assembly[;], and a
4 second waveguide;
5 a fourth collimator assembly comprising a GRIN lens and a [first]
6 waveguide; and
7 a second single-side-pass filter optically coupled to the GRIN lens of the
8 third collimator assembly and the GRIN lens of the fourth collimator assembly, wherein
9 the second single-side-pass filter reflects a third wavelength of the plurality of
10 wavelengths between the first waveguide of the third collimator assembly and the second

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11 waveguide of the third collimator assembly, and passes the first [frequency] wavelength
12 of the plurality of wavelengths between the first waveguide of the third collimator
13 assembly and the [first] waveguide of the fourth collimator assembly.

1 5. (Amended) The optical device of claim 4 further comprising:
2 a fifth collimator assembly comprising a GRIN lens, a first waveguide
3 optically coupled to the first waveguide of the second collimator assembly[;], and a
4 second waveguide;
5 a sixth collimator assembly comprising a GRIN lens and a [first]
6 waveguide; and
7 a third single-side-pass filter optically coupled to the GRIN lens of the
8 fifth collimator assembly and the GRIN lens of the sixth collimator assembly, wherein
9 the third single-side-pass filter reflects a fourth frequency of the plurality of optical
10 signals between the first waveguide of the fifth collimator assembly and the second
11 waveguide of the fifth collimator assembly, and passes the second wavelength between
12 the first waveguide of the fifth collimator assembly and the waveguide of the sixth
13 collimator assembly.

1 6. (Amended) The optical device of claim [2] 3 wherein the first
2 collimator assembly, the second collimator assembly, and the first single-side-pass filter
3 are an integrated assembly.

1 13. (Amended) The optical device of claim [9] 12 further
2 comprising:
3 a fifth I/O waveguide carrying a fourth wavelength of the plurality of
4 wavelengths; and
5 a [second] third single-side-pass filter, wherein the [second] third single-
6 side-pass filter reflects the fourth wavelength between the first I/O waveguide and the
7 fifth I/O waveguide and passes the second wavelength between the first I/O waveguide
8 and the third I/O waveguide.

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- 1 20. (Amended) The optical device of claim [14] 19 further
2 comprising::
3 a third collimating lens comprising:
4 a dual capillary GRIN lens with first and second waveguide terminals;
5 an optical filter coupled to the dual capillary GRIN lens; and
6 a single capillary GRIN lens coupled to the optical filter [; and].
7 wherein the first waveguide terminal of the third collimating lens is
8 optically coupled to the single capillary GRIN lens of the first collimating lens.

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